

## Influence of gender on people with disabilities' work relationships: prospects for ergonomics interventions.

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## **Abstract**

Norms and values embedded in what is referred to as ‘institutionalized gender,’ defined by the distribution of power between genders in the political, educational, religious, medical, cultural or social institutions of a society, exist even today. The above mentioned influential institutions shape societal norms that define, reproduce and justify differing expectations and opportunities for women, men, girls and boys. Using qualitative methods, 41 semi-structured interviews among employed people with deafness/hard of hearing (DHH), blindness/low vision, motor disabilities, or chronic pain from three administrative regions of Québec (Montréal, Outaouais, and Montérégie) were analyzed. The results show that while gender is omnipresent in participants’ remarks, it is not necessarily associated with exclusion from employment, but most certainly with perpetuating some forms of inequity in work situations. Solutions to raise awareness among ergonomists working with people with disabilities are suggested.

## **Practitioner Summary**

Based on 41 semi-structured interviews among employed people with disabilities, a relationship between the gender of the participants and factors facilitating or inhibiting their integration into employment were established. Solutions to raise awareness among ergonomists working with a doubly marginalized population – women with disabilities – are suggested.

## **Key words**

Sex and gender, population with disabilities, labor-market participation, inclusive environment, workplace integration

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The authors declare that there is no conflict of interest

## Introduction

In Canada, the job market is still quite segregated, contributing to differing effects of work on women's and men's health. Women and men often have different occupations, carry out different tasks within the same occupation (horizontal segregation) and hold different hierarchical positions with unequal power within their organizations (vertical segregation) (Laberge et al., 2020; Laberge et al., 2012; Messing et al., 2003). Therefore, when carrying out occupational health studies, it is important to take into consideration the links between sex and gender (s/g) alongside the analysis of risks and results (Messing & Mager Stellman, 2006; Quinn & Smith, 2018).

Still today, gender norms and values embedded in political, educational, religious, medical, cultural, family or social institutions persist (Johnson et al., 2007; Johnson et al., 2009). These influential institutions shape societal norms that define, reproduce and justify differing expectations and opportunities for women, girls, men, boys. When occupational health studies examine the conditions of people with physical disabilities, such as deafness/hard of hearing (DHH), blindness, motor disabilities or chronic pain, challenges arise, and integrating a s/g sensitive approach requires close attention to underlying tensions in work environments. This knowledge can then be used to understand the influence of institutionalized gender and to integrate a s/g analysis into ergonomic interventions to avoid perpetuating prejudices, stereotypes, and inequities in working conditions or health. Unfortunately, even if it is considered state of the art (Messing et al., 2021), there are no simple guidelines in ergonomics for integrating s/g analysis into interventions. The objective of this special issue is to highlight the progress that has been made and how this knowledge can be used to understand the influence of institutionalized gender and to integrate s/g analysis into everyday ergonomics interventions. In this regard, the article by Laberge, Chadoin, Inigo, Messing et al. (2021), also in this issue, can be referred to.

This is especially germane for work with women, who continue to encounter systemic barriers, or men with disabilities, who are often directed to less physically demanding jobs that are consistently undervalued and are predominantly held by women.

## 1. Sex, gender, and disabilities

Sex and gender are distinct but inter-related concepts. Sex, defined most often by the biological, anatomical or hormonal attributes of a person, can be an important factor when the physical or physiological aspects of an occupation are under study. Whereas gender, defined by socially and culturally constructed roles, interpersonal relationships or identity, is more often taken into consideration when studying social, identity or power dimensions of the same occupation (Johnson et al., 2009). In addition, social participation in life habits (Fougeyrollas, 2010), which is characterized by social roles (e.g. family responsibilities) or daily activities of individuals (e.g. personal hygiene), vary according to sex or gender, influencing an individual's career path and physical and psychological health outcomes (Boman et al., 2015; Gellerstedt & Danermark, 2004). For example, women more often than men, are assigned repetitive and monotonous tasks placing them more at risk of chronic pain (Rissén, 2006). In fact, several

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studies have shown that men and women cannot physically undertake work in the same way (Courville et al., 1991; Laberge et al., 2012; Messing, 2009; Messing et al., 2003). Yet, employment constitutes an important way that individuals develop self-esteem and build social networks.

People with disabilities are less likely to participate in the labor market than those without disabilities. Based on data from the US Bureau of Labor Statistics, this gap has existed for more than 70 years (McDonald, 1949). Thus, there is not only a gap between men's and women's work; there is also a gap between the working and employment conditions of people with disability and those without disability. According to Statistics Canada, in 2017, people with disabilities' employment rate was 20% lower and their unemployment rate was 5% higher (Morris et al., 2018).

Therefore, when someone is both a woman and a person in a disabling situation, the gap grows larger and it becomes essential to study the role of gender in the process of workplace integration, especially considering that women in disabling situations continue to stress delays on a series of indicators in the social and health domains compared to their male counterparts (Hogansen et al., 2008). In fact, women are more at risk of unemployment and of holding less valued jobs than men with disabilities (Randolph & Andresen, 2004). Women with disabilities 45 years and older are the most vulnerable to these outcomes (Morris et al., 2018). In 2017, only 59% of Canadian women aged 15 to 64 with disabilities were employed, compared to 80% of women of the same age without disabilities (Morris et al., 2018). In addition, women with disabilities, on average, are more psychologically affected by inequitable working conditions, particularly because they earn less, are more exposed to work related stress and are less likely to have autonomy in their working conditions (Brown, 2014; Brown & Moloney, 2019).

Studies in the 1990s showed that the employment rate among women with disabilities increased substantially, but this was primarily due to an increase in part time work with less job security, low income and little or no benefits (Jans, 1999; Yelin, 1993). Since then, a number of research studies have shown that women living with disabilities continue to be disadvantaged and have lower employment rates and earnings levels (Pettinicchio & Maroto, 2017) or are more likely to experience harassment on the basis of gender and disabilities (Shaw et al., 2012).

Socio-environmental factors can also have an impact on working and employment conditions. For example, some social norms are still widespread in workplaces and create actual segregation because they feed into common stereotypes, such as, "it is easier for a woman to work in the care sector because she is more empathetic, whereas men, who are stronger, should carry out the physically demanding tasks." Furthermore, Livingston, Pollock & Raykov (2016) explain that women still assume a greater share of responsibility for housework and family-related care, which influences their ability to work full time and/or to get a promotion.

In terms of gender differences, Lindsay and colleagues (2019) report that many women look to the social sciences and caregiving careers to choose a job and are more often limited in career advancement opportunities due to gendered family role expectations (e.g., childcare, meal preparation, etc.). Because women do fewer hours than men in their paid position to be able to attend to family responsibilities, they are often more limited in their professional aspirations. Men, who are, incidentally, more drawn to careers in the sciences, technology and computer

sciences, can therefore have a more productive work rhythm giving them a hiring advantage. In addition, women with disabilities from a visible minority are subject to triple discrimination (Wright & Leung, 1993).

Some researchers put forth that racial discrimination and disability- or gender-based discrimination should be considered together, rather than separately (Stuart, 1992) through qualitative analysis of multiply marginalized individuals' realities (Agénor, 2020). Vernon (1999), however, claims that discussing multiple discriminations simultaneously complicates description. In addition, discrimination on the basis of disability, racialization or gender does not play out in the same way in daily life. Context matters. In certain workplaces, discrimination may be sparse, with instances of racism, sexism and ableism arising at different times from different quarters, whereas in other contexts such as in a traditionally white male workplace, for example a team of heavy equipment operators in rural Quebec less exposed to diversity, a racialised woman with physical disabilities may experience sexism, racism, and ableism consistently and simultaneously in her workplace. It is for this reason that Crewshaw (1989) developed the concept of intersectionality to shed light on the complexity of these experiences.

Yet, simply analyzing s/g-related factors in the workplace with techniques such as controlling for s/g as a variable is not enough to bring about significant change in ergonomics practices, as Laberge et al. (2020) and Quinn and Smith (2018) have shown. It is also necessary to examine the work context and relational mechanisms to better distinguish outcomes and intervene with individuals. Having statistics showing these differences in employment conditions raises awareness in professional circles and among ergonomists but having solutions and strategies to readily implement during work activity analysis would be even better. With this in mind, we wanted to look at the factors influencing workplace integration among people with disabilities. Ergonomists can help companies develop enabling environments (Falzon, 2014); these environments have the potential to reduce barriers to employment and support learning and workplace integration. Ergonomists can also advocate for greater consideration of diversity and, in particular, gender sensitivity. This article will provide ergonomists wishing to orient their interventions in this direction with important suggestions.

The purpose of this article was to analyze and describe the factors that facilitate or hinder workplace integration of employed persons with disabilities with particular emphasis on s/g. Our analysis involved mapping the s/g relationships described by participants, exploring the perceptions of people living with visual, hearing, motor, or chronic conditions regarding gendered values and norms in workplace integration or looking for a job, and identifying references made to institutionalized gender in interviews.

## 2. Methods

This study used qualitative methods based on a phenomenological approach, which aims to understand participant's "interior world" as accurately as possible, to then study their lived experience (Van der Maren, 1996, p. 11). In this approach, it is of great value to grasp the meaning actors attribute to their behavior, and how they live their experiences. Actors are viewed as the main contributors to the research. This approach is entirely compatible with the

use of qualitative interviews. The methodology was based on the work of Denzin and Lincoln (2011) and Miles, Huberman, and Saldaña (2014), and is closely linked to the interpretive research approach. This project received ethics approval from the *Centre intégré universitaire de santé et de services sociaux de la Capitale-Nationale's* ethics committee (MP-13-2020-1813).

### 2.1 Population

The research described here is part of a larger multidisciplinary project, *Disability, Employment, and Public Policies Initiative* (DEPPI). The main objective of the DEPPI project is to develop policy evaluation and analysis models aimed at promoting workplace integration and retention for people with disabilities. In the context of this study, close to 180 people from 17 administrative regions of Québec and New-Brunswick were interviewed. Participants were between 16 and 65 years old, had either a visual, hearing, motor or chronic pain disability and were in the job market (either looking for work or employed). They were recruited through a purposive sampling process on the basis of their disabilities and employment status without regard to their s/g, but it should be noted that the s/g ratio of our sample is similar to that of the total population recruited. Considering the scope of the project, the work was divided among four teams. Each team was responsible for interviews in three or four regions. Participants were recruited through organizations, associations, foundations or government services working with this population. People expressing an interest in the study were then contacted by phone or email to obtain certain personal information (age, disability, employment status) and to set up a meeting for the interview. Our research team was responsible for the interviews in the Montreal, Montérégie and Outaouais regions. To date, we have conducted 54 interviews with people with a physical, visual, hearing or chronic pain disability (28 in Montréal; 18 in Montérégie; 8 in Outaouais). Of these, 13 people were looking for work and 41 were employed. The present article discusses these 54 interviews. The employment status of people interviewed here is similar to those interviewed in other regions.

### 2.2 Data collection

Data collection took place in two steps. The first was a semi-directed qualitative interview and the second was an on-line sociodemographic and economic questionnaire. The interview lasted around 90 minutes and questions were asked about the participant's workplace integration since training, the components of the International Network on the Disability Creation Process model (personal and environmental levers and obstacles), use of specialized labor services, their perception of employer's openness to hiring people with disabilities, their opinion about disclosing their disability during the job search process, the hiring process or once in their job, the influence of sex and gender in employment, etc. Participants also filled out an on-line form on their self identified s/g, marital status, education level, employment status, sector, revenue, knowledge of fiscal programs specific to person living disabling situation, etc. The interviews were carried out between November 2019 and March 2021. Before the COVID-19 lockdown (March 14<sup>th</sup> 2020 in Québec), meetings between the interviewer and the interviewee took place in person, at a location chosen by the participant. After lockdown, interviews continued, but on-line using *Zoom* software. In both cases, interviews were recorded directly on the researcher's computer and stored in a secure electronic cloud. Interviews were transcribed in their entirety and data was coded and anonymized. Even though the data collection methods remained virtually the same, it is possible that the pandemic modified participants' professional

experiences (job searches, obstacles, etc.)<sup>1</sup>. Results refer to the period in which the interview took place (before or after the onset of the pandemic).

The results presented here stem primarily from the qualitative interviews, however, to complete the participant profile, information from the on-line questionnaire (education level, size and sector of the business, number of hours worked per week, level of satisfaction with hours given) were used.

### **2.3 Data Collection Validation**

Two interview guides were developed for semi-directed interviews. Questions varied in function of the employment status of the participant, the main difference being in the formulation of the questions. For those who were employed, questions were geared to their current job. For people who were looking for work, questions probed about the participant's ideal job situation. After each sub-team had carried out two pre-interviews, all the teams met to go over the questions. At this point, the team had feedback on the treatment of s/g in the questions. Since the beginning of the project, several modifications have been made to the questions to better target s/g. At the beginning, the following questions generally led to responses in the negative: "do you believe that the fact that you are a woman (or a man) influences your educational or occupational path or your job search strategies? Is your s/g an obstacle or a lever to your professional integration or your career advancement?" These questions even led to discomfort for some participants, to the point that some teams had decided not to ask them. Following this meeting, our team (specialized in s/g) offered a workshop and produced a document providing tips for better integrating s/g questions into the interview guide. As a result, more inclusive wording was incorporated into the interview guide. For example, questions that were initially closed-ended, such as "Are you a man or a woman?" were changed to "which sex do you identify with and is it the same as the one assigned to you at birth?" Further reformulations were suggested, such as "According to you, how has being a man or a woman influenced [...]?" and "I notice that you have chosen a job that is predominantly occupied by men/women. In your opinion, is this by chance or design; please explain..." These changes were made to disassociate the questions from the person's s/g identity and re-focus on interpersonal relationships and factors related to gender institutionalization at workplaces.

### **2.4 Data Analysis**

Given the qualitative nature of this study, thematic content analysis was the preferred method of analysis because it is useful for describing, clarifying, understanding, and interpreting a situation (Denzin & Lincoln, 2011; Paillé & Mucchielli, 2012). As put forward by Paillé and Mucchielli (2012), sequential thematic analysis is an approach that is partly deductive and partly inductive. In the research process, certain themes emerged from the respondents' statements while others were theoretically guided.

The themes we retained were: career choice, relationship between the participants and the people they alluded to in their interview (the role of the person in the participant's trajectory, the type and quality of the relationship), gendered norms and values evoked during the interview (social prejudices and expected roles based on the s/g of the person), institutionalized markers of

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<sup>1</sup> It should be noted that participants interviewed prior to the pandemic were not interviewed again afterwards.

gender (power relations in an institution in function of s/g) and the effects of the pandemic on interpersonal relationships and employment. As a methodological precaution in the theme-formulation process, and to ensure that the definitions of the themes were sufficiently plausible and relevant that another researcher could use the same analysis grid and obtain similar results, we conducted a check-coding exercise. The rate of agreement obtained was full consensus after discussion. These results corresponded to the recommended level of consistency for check-coding (91% before discussion and consensus after discussion) (Miles et al., 2014).

### 3. Results

In addition to the description of study participants, the results section is divided into three subsections, each corresponding to a gender analysis angle that emerged from the data: gendered interpersonal relationships (including power relations), persistence of stereotypes in work environments, and institutionalized gender in the workplace. For ergonomists it is important to take full measure of these three dimensions, which shape workplace inequities, to eventually implement interventions that address them, or at the very least, do not unconsciously uphold them. Table 1 provides participants' characteristics for women and men separately. The 12 men and 29 women were between 25 and 60 years old (average women (w)=41 years; average men (m)=38 years). Seventeen people had a hearing disability (nw=10; nm=7), five people had a visual disability (nw=5), 14 people live with motor disabilities (nw=9; nm=9), and five people suffer from chronic pain (nw=5). Education level varied from a high school diploma to a master's degree, with most participants having completed a university degree (nw=19; nm=10).

Table 1: Characteristics of the participants

		N = 41	
		m	w
Sex		12	29
Age	Average (years)	38	41
Disability	Hearing	7	10
	Visual	0	5
	Motor	5	9
	Chronic pain	0	5
Administrative region	Montréal	4	15
	Montérégie	4	10
	Outaouais	4	4
Language spoken at home	French	9	23
	French/English	1	4
	Québécois sign language	2	2
Time of onset of disability	Pre-school	11	16
	During school years	0	4
	After schooling	0	3
	While employed	1	6
Post-trauma disability	Yes	1	3
	No	11	26
Work-related accident	Yes	0	1
	No	12	28

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Education	High school	0	3
	Professional training	1	3
	Community college degree	1	4
	University certificate	2	3
	Bachelor's degree	4	10
	Master's degree	4	6
Employment domain	Administration, accounting and finance	8	13
	Arts and culture	2	1
	Buildings, public works, planning and transport	1	4
	Education and social sciences	0	7
	Justice and public safety	0	2
	Health	1	2
Link between education and work	Yes	9	9
	No	1	8
	Similar	2	12
Employment assistance measures (a person could have more than one measure)	Work integration contract	2	10
	Adaptations/accommodations	4	17
	Job destined for people with disabilities	0	1
	Woman in a non-traditional occupation	0	1
	None	9	11

Participants worked in different domains: administration, accounting and finance (nw=13; nm=8); Arts and culture (nw=1; nm=2); Buildings, public works, planning and transport (nw=4; nm=1); Education and social sciences (nw=7); Justice et public safety (nw=2) and Health (nw=2; nm=1)<sup>2</sup>. While the majority of participants reported that there was a link, however weak, between their education and their occupation (nW=17; nM=10), nine people stated that there was no link between their studies and their current work (nw=12; nm=2).

Half of the people interviewed reported not using any employment assistance measures (nw=11; nm=9). For the others, some mentioned having a Work Integration Contract (*Contrat d'intégration au travail*) (nw=10; nm=2) and/or adaptations/accommodations that might require input from an ergonomist (nw=17; nm=4). One woman obtained her job because she is a person in a disabling situation, and another was hired through a program that encourages the integration of women in non-traditional occupations (such as mechanics, heavy equipment operators, carpenters, or engineers).

In the study population, the majority of men (82%) did not use employment assistance measures, whereas this is the opposite for women (38%). Twenty-four people mentioned needing at least one workplace accommodation (20 women and 4 men), and among those who needed a second or a third accommodation, women (n=10) were more numerous than men (n=2).

Even though most interviewees did not explicitly identify s/g related sources of inequity in their workplaces, several did explain different aspects of their work that were influenced by s/g.

### 3.1 Interpersonal relationships

<sup>2</sup> Work domains as defined by the Government of Québec

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In their statements, participants frequently discussed the relationships that may have influenced their workplace integration. In positive situations, the considerations discussed often referred to encouragement given, professional support, and the professional role models they had. Although the participants did not explicitly emphasize gender, it is interesting to note that when these relationships were positive, the comments, by both men and women, referred to both genders.

*The director[woman] is really very respectful. You know, a director that doesn't have a power control complex, I like that. P82 – w – motor disabilities*

*My boss [...] is really a great guy, [...] one time he said, "you know, for the team, I would make X decision, but that wouldn't be good for your career, so we're going to take this other decision for your career." P86 – w – blindness*

*At first, because she hired me, I developed a very nice relationship with my supervisor. She's really nice, smiley, and she was like that with everyone, but seriously I felt very, very comfortable. P92 – m – motor disabilities*

When the comments were negative, however, female participants usually spoke of male colleagues or managers<sup>3</sup>.

*We ended up with a unilingual English-speaking manager, a bit clueless [...]. He was really bad...Listen, I learned later that he had four harassment complaints against him [...] He would call Friday night at 10pm or Sunday at 9:30pm and say, "I'd like to have X for my presentation Monday morning at 8am." [...] I was going through a burn out, my mental health was really affected. I was really anxious when I was at home. P156 – w – motor disabilities*

While they made fewer negative comments, when they did so, men usually referred to women, even if, as in the next extract, the language difference is also raised.

*She's an anglophone and a little, well, very strict. She rarely shows openness to change and she doesn't really listen to my suggestions either. P144 – m – DHH*

Some participants admitted that the s/g of their colleagues could have had an impact on their workplace integration and was even sometimes critical in their ability to get or keep a job.

*I have to have at least one female colleague without a disability who accepts to help me go to the bathroom [...] we hired a new person, and this was almost a hiring criteria: "would you be willing, from time to time, when the agency can't come, to help a colleague who needs you?" P27 – w – motor disabilities*

This participant with motor disabilities also mentioned numerous measures that her manager accepted when she was hired (flexible schedule, redivision of tasks, hiring help during events).

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<sup>3</sup> On 74 meaning units, 24 corresponded to negative relationships. Of these, 19 were reported by women and 68% referred to opposite sex relationships. Of the negative woman-woman meaning units (32%), all refer to superiors, not colleagues.

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Further, depending on the level of severity of the disabilities and its consequences on work productivity, the majority of positive relationships brought up in interviews centered on measures put in place by colleagues and bosses to enable workplace integration.

*I really liked that job because the boss put in place a lot of adaptations for me. He decided to learn Quebec sign language (LSQ) to be able to communicate with me. [...] he was really open, welcoming. P157 – w – DHH*

*The librarian [...] is really openminded and it was with her that we came up with a plan for me to not have to go through all sorts of services to get me articles adapted to my blindness. P19 – w – blindness*

Changes in professional practices due to the COVID-19 pandemic have had impacts on interpersonal workplace relationships. For some, the pandemic has led to improved working conditions through making the workplace (at home) more accessible and through reducing harassment.

*As far as work goes, I love the pandemic. It's been a blessing because even though the federal public service is rethinking workstations, the work environment, which is really not a friend to me, well, it doesn't exist anymore! [...] It's really great for everyone. You know, it's a lot harder to bully someone in a videoconference than in real life. P157- w – motor disabilities*

However, people who could not work from home reported that they continued to be victims of bullying and harassment. It is important to note that only the women participants in this research reported this type of behavior. The following explicit and moving passage demonstrates the extent to which women with disabilities can be humiliated and inhumanly treated in workplaces.

*[...] we get our asses grabbed. They look at our breasts. We get told, "you should wear tighter shirts, it would be more fun to work with you." One time, a guy at the lab pulled down his pants and said, "My wife didn't want to give me blow job this morning. You wanna do it? I'll be in a better mood." And he had the nerve to do it twice! Because when the boss came back, he said, "What did you do?" and he [the aggressor] redid it! P99 – w – chronic pain*

In this testimony of a completely unacceptable workplace situation, the participant explains that she works for the biggest employer of the region, in a primarily male environment and that her job description requires no specific qualifications. She also explained that she considers herself lucky to have a job with good pay and benefits and that she couldn't find that elsewhere. In this passage, the boss was warned by third parties, but the participant explains that since she only has ten years until retirement, she prefers to ignore this reprehensible behavior rather than denounce it to keep her job. This demonstrates that study participants perceive their employment opportunities as limited and that they avoid reporting their negative experiences for fear of being locked out of the job market.

### 3.2 Persistence of gendered stereotypes in workplaces

People are confronted with social stereotypes based on the social norms, values and beliefs shared by the majority of the population. Whether you are a woman, a man or a person with limitations, these stereotypes shape certain choices and the opinion that you have of your own abilities or professional options. It is difficult to isolate stereotypes based on s/g from those related to disability. On several occasions during interviews with participants, gendered stereotypes were evoked in conjunction with limited employment opportunities for women. Moreover, men and women made similar observations in this respect.

*There's also the whole bit about management [who seem to think]: "well, women are more emotional, women manage their emotions less well. It's not rational..." So, women have fewer chances for promotion or management positions. P75 – w – blindness*

Other statements targeted gendered prejudices intersecting with stereotypes about disability, as illustrated by the following excerpt.

*As a homosexual [with a motor disability], I'm confronted with what I would have liked to have been – tall and muscular – and as a guy I'm also confronted with what I would have liked to have been – tall and muscular. P67 – m – motor disabilities*

This interaction between gendered stereotypes and those surrounding disability were even more striking among the women participants.

*I have ADD...but it's not diagnosed as such because I didn't want to add yet another label. I didn't want to be a First Nations woman with a disability AND attention deficit disorder...it was just too much, too many labels for me and labels are very heavy to carry! P98 – w – motor disabilities*

Thus, the idea that appearances and physical aspects are still among the criteria that can influence job searches, hiring and workplace relationships remains well established in people's minds, mainly in the comments made by women in the study, but also by the men.

*Sometimes I ask myself, "do they want me just because I'm a woman in a disabling situation [cerebral palsy] and I'm young, just so that it looks good on the photo, or to be able to say in the report that they have a person like me? Or do they want me because of my assertions and what I have to say?" Often it is a bit of both. P105 – w – motor disabilities*

In this excerpt, it appears that stereotypes, while often the source of discrimination, can sometimes work in the person's favor when they highlight positive attributes of the person; but in these circumstances, some women seem to feel that they are being used to enhance the company's image.

As far as stereotypes are concerned, both men and women have very different disclosure behaviors depending on whether or not their disabilities are visible, especially in the case of chronic pain, which affects primarily women. For some, disclosure of their disability is inevitable

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because it is very apparent (e.g. white cane, wheelchair, physical characteristics). For others, the presence of "invisible" disabilities, i.e., those that are not physically apparent, seems to add a layer of complexity, leading to discrimination in hiring or the emergence of prejudices after hiring.

In the interviews conducted here it was primarily the people suffering from a chronic health condition, such as fatigue or chronic pain, who encountered problems with disclosure. Whereas DHH, blindness, and motor disabilities are physical disabilities that are generally better understood, chronic pain affected primarily women in our study population and seems to provoke such strong prejudices that some women are refused work or harassed by their employer once they mention it.

*I had an interview once and I explained [my fibromyalgia] and the response was a categorical no. I know other people with fibromyalgia who have lived through the same thing. They've been refused jobs. P74 – w – chronic pain*

*I was given the green light to go back to work, but my employer didn't want me to [...] I was finally able to come back two to three days a week [...] But when I wanted to come back full time, my boss refused. I was fighting to be able to go back to work [...], but my employer didn't want me to. He said, "No! You won't be able. You simply won't be able. We're not going to play yo-yo. We don't believe you." P – w – chronic pain*

Degenerative diseases like multiple sclerosis, of which three quarters of those affected are women (Public Health Agency of Canada, 2018), have an impact on employees' ability to change jobs.

*If you go to work for another employer, if you're let go but not 'cause you're sick, then you don't have a problem. But for me, anywhere I go, I'll never be covered for my multiple sclerosis. It sounds alarms for all the insurance companies. "Oh, she's got multiple sclerosis, we're not going to cover her, it creates a precedent." That's another reason I'm limited in my options for changing jobs now because the older I get, the greater the chances that I'll need full and permanent disability. The older I get, the more sick leave I take, so that's another reason that I can't leave this job even though it drives me crazy. P128 – w – motor disabilities*

A diagnosis associated with chronic pain or a degenerative disease, which mainly affects women, not only impacts the hiring process, absences and sick leave, but also the possibility of easily changing jobs. Thus, people with disabilities, especially women, are sometimes resigned to difficult, deleterious or even totally unacceptable working conditions.

### 3.3 Institutionalized gender

The women in our study who work in traditionally male occupations reported that, unfortunately, the norms and values circulating in the workplace were based on unconscious biases that perpetuate systemic injustices. In addition, participants noted that certain institutionalized practices regulate job openings and the tasks that women can and cannot carry out and that they create tensions in work relationships.

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*On Monday, they gave a woman a supervising position at the garage [...] because they [management] say its less physical. So less of a chance of having a work-related accident.... And the guys went "ah, she's going to get stepped on, it's crazy. Luckily, she's not our boss, we would have put her in her place right away." P99 – w – chronic pain*

*At the beginning [in the transportation company] I was often told, "Ah, you're just a woman, what do you know?" P74 – w – chronic pain*

These attitudes even led one participant to reorient her career toward a workplace environment that, according to her, would have fewer s/g prejudices because it was less physical.

*As a woman in a male-dominated environment, I could be bullied. I really didn't feel like fighting that kind of atmosphere. So, I decided to go into something else. [...] That's what I went through in the world of carpentry. P157 – w – DHH*

Unfortunately, some workplaces still seem to be marred by an ambiance where s/g has a large influence on power relations. Thus, some participants consider a male-dominated hierarchy to be the unquestioned norm. In the following passage a participant points out that in his workplace women and men have the same working conditions, but clearly not the same possibilities because mostly men are hired.

*It depends on the manager. But sometimes men are more likely to hire men which makes sense, men are more familiar with men. When I ended up moving to the financial markets department, well, there, there is no difference. It's really just men in the department, but whether you're a man or a woman you're treated the same. P153 – m – DHH*

Other participants have noted important differences in promotion opportunities contributing to their perception that higher positions are not accessible to women.

*Being a French-speaking woman with a disability, imagine if I were transgender and black as well! I was not credible. I was just not at all credible.... P156 – w – motor disabilities*

*It's harder to get a job from a man,...I think it's because of our culture, women already have to fight, disability or not, to get a job and to have equal pay. P98 – w – motor disabilities*

On the other hand, woman-dominated hierarchies are still seen as abnormal or problematic: although seen as possibly more open-minded, women, because of their sex (motherhood) or gender (childcare), can be labelled as more demanding or more liable to miss work.

*It was never the same manager who administered it [speaking of his yearly evaluation], there are a lot of managers who are women. There is a lot of turnover in that sense too. I haven't really built a reliable and sustainable relationship with a female manager before. P145 – m – DHH*

*Yeah, I often had women for bosses. I've found that women are more openminded...they're more openminded, but they tend to cultivate unhealthy*

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*workplaces, they tend to say, "Ah, I'm a good person: I hire people with reduced mobility. I'm inclusive," [...] but in the end, they ask you to do more! P98 – w – motor disabilities*

The community and associative sector and public services aren't free of this type of behavior, even when the primary mission of these organizations is to aide clients with disabilities and to promote an environment that is as equitable as possible, both in terms of tasks and salary.

*The boss left at 2pm, [...] his employees, two women, worked like crazy. He didn't do much, (laughing) [...] I would watch my colleague, who had a disability, work really hard, she really believed in people [the people she advised for her work]. I said to myself, it'll always be like that, we'll get that type of manager who earns twice as much as his employees. P148 – w – DHH*

Institutionalized gender also seems to be a factor in the hiring process. In the following example, a role that is typically associated with women (child rearing) becomes a constraint for the employer and, at the same time, a basis for discrimination.

*Women get asked at their interviews if they want to have children, which is absolutely not allowed. P75 – w – blindness*

## 4. Discussion

The results of the present study highlight that the s/g of employees with disabilities influences professional interpersonal relationships, is a source of prejudice and stereotypes, and results in institutionalized discriminatory practices that are still very much present. This study is thus in line with the conclusions of other research (Brown & Moloney, 2019; Doren et al., 2011; Jones et al., 2006; Kavanagh et al., 2015; Messing, 2009).

The originality of our results lies in the fact that the data is based on qualitative research guided by a phenomenological approach, which allowed us to explore participants' perspectives on their own workplace experiences. This made it possible to highlight the experiences of women and men with deafness/hard of hearing, blindness, motor disabilities or chronic pain and to look at elements specifically related to s/g in professional contexts. Although gender was omnipresent in the participants' discourse, it was not necessarily associated with exclusion from employment. It was, however, associated with the maintenance of forms of inequity in work situations. These included inequities in terms of the tasks to be performed in accordance with limitations (e.g. being required to do as much as those without disabilities), inequities in terms of discriminatory conditions (e.g. being asked about family planning during an interview), inequities in access to promotions or typically male tasks (e.g. women have to prove themselves more, women have less credibility in management or traditionally male positions), inequities in the work environment (e.g. bullying in the workplace), inequities in salary and benefits (e.g. access to group insurance, equal pay for work of equal value), inequities in the ability to change jobs (e.g., more difficulty in finding employers willing to hire a person with a disabilities), and inequities in the organization of work (e.g. difficulty in having the flexibility necessary to go to appointments). It could be the case in some workplace situations that gender diversity poses certain obstacles to the integration of women and men. For example, as women penetrate the traditionally male dominated domains, such as carpentry, they are faced with even more barriers to success than in more mixed or

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predominantly women-occupied sectors. In this regard, some of the evidence reported by participants in our study overlaps with the findings of Bobbitt-Zeher (2011) and Dick-Mosher (2015), who analyzed discrimination narratives based on sexual discrimination cases brought before the legal system; two very different social and professional contexts that nevertheless appear to produce similar effects. As ergonomists, it is therefore essential to target the work determinants that perpetuate these s/g-based inequities in the workplace to intervene more effectively and thus prevent situations that are potentially harmful to the health or performance of women and men with disabilities. To better understand and analyze the determinants of these environments, ergonomists should ask participants about their interpersonal relationships and the gendered aspects of their daily work life rather than posing direct questions about the impact of s/g on barriers experienced at work, in a process similar to our own rephrasing of questions.

The small number of participants in this study does not allow for generalization of the results to the whole population, but that is not the purpose of qualitative research. Furthermore, although the qualitative nature of the data did not allow us to make explicit connections between the participants' characteristics (first language, degree, field of employment, etc.), it should be noted that they may have had an impact on the participants' professional experiences.

It is also the case that in our sample there were more than twice as many women (71%) as men (29%). However, it must be noted that the results obtained converge with results from other research that also show that women with disabilities are doubly disadvantaged (Boman et al., 2015, 2020). This situation is especially present in Canada. Unlike many European Union countries where employers in both the public and private sectors are required to employ people with disabilities (Fuchs, 2014), Canada instead has prioritized the creation of employment programs, financial incentives, or promoting admirable social values by commending employers who voluntarily hire people with disabilities (Working Group on Employment Opportunities for People with Disabilities, 2013). The result in Canada is that among people aged 25-64, those who report having disabilities are less likely to be employed (59%) than those without disabilities (80%) (Morris et al., 2018).

Also, given the higher proportion of women in this study (67%) who requested support measures at work compared to men (accommodations and/or Work Integration Contract), the question of whether women have more significant disabilities or whether the tasks they are asked to perform require more support measures is raised. Research shows that women are not only more often exposed to stressful work environments, but that stress affects women's work performance more (Babin & Boles, 1998; Brown & Moloney, 2019). This implies that during ergonomists' work activity analyses, they should better evaluate men and women's differing situational operational leeway in the tasks they are asked to perform, as well as those of the natural helpers who are called upon to help them (colleagues, assistants hired to help the employee), who also have a sex and a gender. Taking s/g into account in the analysis of work is therefore important to ensure that unconsciously sexist or discriminatory practices are not perpetuated. Thus, it is in the ergonomist's interest to better document the social relations between men and women at work (e.g. tension between male and female employees in traditionally male jobs), the persistence of certain prejudices or stereotypes (e.g. task sharing based on people's s/g), or even bullying, as well as indicators of institutionalized gender (e.g. only men in management positions). While it is

true that there are no s/g guidelines for interventions in ergonomics, the above suggestions should help to further guide the analysis process and encourage instructors to integrate more of these concepts into their training of ergonomics students.

The fact that the study began before the pandemic and that data collection continued despite lockdown can be seen as a limitation of this research. For example, in the first interviews, participants' work lives had not yet been affected by lockdown, working from home, wearing masks or using new technologies, etc. In contrast, in interviews conducted from March 14<sup>th</sup>, 2020 onward, participants reported feeling one or more effects of the pandemic on their personal and professional lives. Although we did not have access to this information for those who participated in the research prior to lockdown, it is very likely that they experienced similar situations. Nevertheless, it is interesting to see that new professional practices such as the use of videoconferencing platforms and working from home were, for many, a way to reduce work-related constraints, increase flexibility and thus promote their social participation. It remains to be seen whether these work-related changes affect women and men similarly.

Ergonomists are interested in work activity analysis. This research provides them with some cues to address work determinants that could be hindering the health or productivity of persons with disabilities. It is therefore critical that ergonomists be made aware of work-related impacts of s/g so that they, in turn, are able to educate workplaces not only about the limitations, but also how the s/g of a person living in a disabling situation can influence their needs and services and how social relationships, unconscious biases, and institutionalized gender within a workplace can promote or undermine equity, diversity, and inclusion in employment and health.

### Conclusion

Information gathered through semi-structured interviews and socio-demographic data was used to further thinking that advocates for the evolution of ergonomics practices. Through the DEPPI project, this study was an opportunity to contribute to a better understanding of the influence of s/g in the development of measures and programs aimed at promoting and supporting the integration and retention of people with disabilities. It was also an opportunity to make a real difference by highlighting discriminatory practices that too often lead to inequities in employment and health, especially for women.

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